

097883

**DISTRIBUTION**  
**UNIT MANAGERS' MEETING**  
**200 AREA GROUNDWATER AND SOURCE OPERABLE UNITS 0057082**

Bryan Foley..... DOE-RL RP (A5-13)  
Marvin Furman ..... DOE-RL RP (A5-13)  
Ellen Mattlin ..... DOE-RL EAP (A2-15)  
Mike Thompson ..... DOE-RL RP (A5-13)  
Arlene Tortoso ..... DOE-RL RP (H0-12)  
Lisa Treichel ..... DOE-HQ (EM-442)

Dennis Faulk.....EPA (B5-01)

Brenda Becker-Khaleel ..... WDOE (Kennewick) (B5-18)  
Zelma Maine ..... WDOE (Kennewick) (B5-18)  
Tina Masterson-Heggen ..... WDOE (Kennewick) (B5-18)  
John Price ..... WDOE (Kennewick) (B5-18)  
Matt Mills..... WDOE (Kennewick) (B5-18)

Lynn Curry ..... BHI (H0-19)  
Garrett Day ..... BHI (H0-19)  
Bruce Ford ..... BHI (H0-21)  
Alison Bryan..... BHI (H0-21)  
Greg Mitchem ..... BHI (H0-19)  
Joan Woolard..... BHI (H0-02)

Tim Lee..... CHI (H9-02)  
Virginia Rohay ..... CHI (H0-19)  
L. Craig Swanson ..... CHI (H9-02)  
Mary Todd..... CHI (H9-03)  
Curtis Wittreich ..... CHI (H9-03)

Stuart Luttrell ..... PNNL (K6-96)  
Mark Sweeney ..... PNNL (K6-81)

Administrative Record (2) ..... BHI (H0-09)

Please inform Alison Bryan – BHI (372-9192)  
of deletions or additions to the distribution list.

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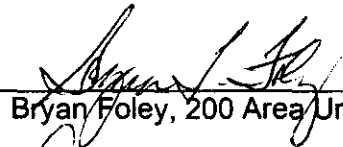
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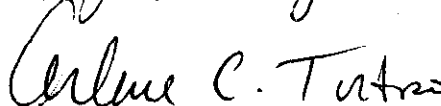
Revised 11/29/01  
**U. S. EPA**

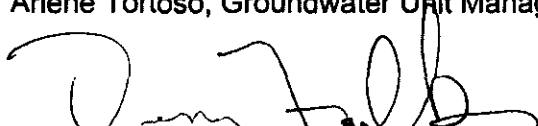
Meeting Minutes Transmittal/Approval  
Unit Managers' Meeting  
200 Area Groundwater and Source Operable Units  
3350 George Washington Way, Richland, Washington  
August 2001

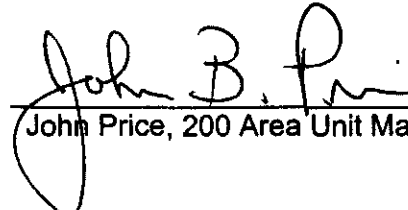
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APPROVAL:  Date 01/24/02  
Bryan Foley, 200 Area Unit Manager, DOE/RL (A5-13) ~~02/14/02~~

APPROVAL:  Date 2/06/02  
Arlene Tortoso, Groundwater Unit Manager, DOE/RL (H0-12)

APPROVAL:  Date 3-4-02  
Dennis Faulk, 200 Area Unit Manager, EPA (B5-01)

APPROVAL:  Date 5-Mar-02  
John Price, 200 Area Unit Manager, Ecology (B5-18)

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Meeting minutes are attached. Minutes are comprised of the following:

Attachment 1	--	Agenda
Attachment 2	--	Attendance Record
Attachment 3	--	200 Area Current Action Log
Attachment 4	--	200 Area UMM Minutes – August 2001
Attachment 5	--	Graph of Carbon Tetrachloride Concentrations
Attachment 6	--	Comparison of Maximum Carbon Tetrachloride Rebound Concentrations
Attachment 7	--	Table of Carbon Tetrachloride Rebound Concentrations Monitored at 200-PW-1 (200-ZP-2) Soil Vapor Extraction Sites July 2001
Attachment 8	--	216-T-26 Crib Analytical Data (Preliminary)

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Prepared by:

  
Alison Bryan, BHI GW/VZ Integration Project (H0-19)

Date

11-29-01

Concurrence by:

  
Bruce Ford, BHI GW/VZ Integration Project (H0-19)

Date

12/19/01

# **UNIT MANAGERS' MEETING AGENDA**

**3350 George Washington Way**

**August 27, 2001**

**1-3 pm.      200 Area      Room 1B45**

## **General (10 minutes)**

- Outstanding Action Items (attached)
- Open for regulatory topics or action items.
- Performance Reporting evaluation (RODs and RDR/RAWP)
- Review of Land Use Presentation to HAB
- Status of TPA Change Packages
  - M-20-01-01 (addresses RCRA TSD closure plan milestones)
  - M-13-01-02 (addresses M-13-00L though M-13-00P)
  - M-15-00-06 (addresses M-15 milestones for 200-PW-2)
- FY 2002 Detailed Work Plan status

## **200-UP-1 (10 minutes)**

- Pump and Treat treatment system operation's status
- Monitoring well installation and characterization sampling status
- CERCLA 5-year review design upgrade status
- Open discussion

## **200-ZP-1 (10 minutes)**

- Pump and Treat treatment system operation's status
- PFP well planning and field preparation status
- Open discussion

## **200-PW-1 Plutonium/Organic-Rich Process Waste OU (10 minutes)**

- Soil Vapor Extraction system
  - Active system status
  - Passive system status
  - Open discussion
- RI/FS Work
  - Work Plan Status
  - Dispersed CCl<sub>4</sub> Plume DQO Status and Schedule

**200-CW-1 Gable/B Pond and Ditches Cooling Water OU (5 minutes)**

- Feasibility Study Status

**200-CS-1 Chemical Sewer OU (5 minutes)**

- Status of 216-A-29 Ditch Sampling Activity

**200-TW-1 Scavenged and 200-TW-2 Tank Waste OUs (10 minutes)**

- Status of Field Activities
  - Preliminary screening results from 216-B-38 Trench borehole
  - Status of 216-B-7A borehole
- PNNL Science and Technology Project supplemental soil samples
  - Waste Management

**200-PW-2 Uranium-Rich Process Waste OU (5 minutes)**

- Rev. 0 Workplan under final regulator approval

**Groundwater and Source Operable Units Unit Managers' Meeting**  
**Official Attendance Record – 200 Area**  
**August 27, 2001**

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
Garrett Day	BHI	Groundwater Treatment	372-9571
Arlene Tortoso	DOE	Groundwater Remediation	373-9631
Virginia Rohay	ERC	Tech support	372-9100
Mark Byrnes	BHI	Tech support	372-9267
DENNIS Faulk	EPA	RPM	376-8631
John Ludowise	CHI	200-PW-1	372-9324
Craig Johnson	CHI	200 Area GW	372-9353
Stuart Luttrell	PNNL	GWater	376-6023
Brenda Jentzen	Dept. of Ecology	200-TW-2 200-PW-2	736-5707
Math Mills	Ecology	CS-1	736-5721
Bryan Foley	DOE-RL	Groundwater RA	376-7087
Craig Cameron	EPA	RPM TW-1 BP-5	376-8665
Tim Lee	CHI	CHI GW Lead	372-9362
Curt Wittreich	CHI	200A RA	372-9586
Bruce Ford	BHI	200A RA	372-9105
Chris Cearlock	CHI	200-CS-1	372-9638
MARY TODD	CHI	200-TW-1 200-TW-4/2	372-9631

**200 Area Unit Managers' Meeting  
OPEN ACTION ITEMS & TRACKING**

16	Distribution of UMM minutes for January, February, March, April, May, and June 2001	Bruce Ford, BHI	Dennis Faulk, EPA	06/28/2001				In review

**MEETING MINUTES  
200 AREA GROUNDWATER AND SOURCE OPERABLE UNITS  
UNIT MANAGERS' MEETING -- 200 AREA  
August 27, 2001**

**Attendees:** See Attachment #2

**Agenda:** See Attachment #1

**Topics of Discussion:**

**1. General**

- Outstanding Action Items – (see attached) Comments on the minutes for March, April, May, June and July 2001 200 Area UMM meetings have been received. Those comments are being incorporated into the minutes and final packages are being prepared.
- Open for Regulatory Topics or Action Items – No discussion.
- Performance Reporting Evaluation (RODs and RDR/RAWP) – No discussion.
- Review of Land Use Presentation to HAB – EPA requested a status of the white papers from Moses Jarayssi.
- Status of TPA Change Packages
  - M-20-01-01 (addresses RCRA TSD closure plan milestones) – DOE-RL stated that the M-20-01-01 is going through concurrence within DOE and should be out by August 27, 2001.
  - M-13-01-002 (addresses M-13-00L through M-13-00P) – DOE-RL stated that the M-13-01-002 is going through concurrence within DOE and should be out by August 27, 2001. EPA strongly recommended that DOE only submit the M-13-00L change package at this time.
  - M-15-00-06 (addresses the M-15 milestones for 200-PW-2) – DOE-RL stated that this was not approved by Ecology. DOE-RL will submit a new change request.
- FY 2002 DWP – The review with DOE-HQ and the regulators is scheduled for Wednesday, August 29, 2001. The GW/VZ Integration Project's manager, Michael Graham, will provide an overview for the review. Following the overview, Groundwater, 200 Area, and Vadose Zone scopes will be presented.



## **2. 200-UP-1**

- Pump and Treat Treatment Systems Operations Status – The system is operating at approximately 50 gallons per minute (gpm). The system was off-line for two days last week.
- Monitoring Well Installation and Characterization Sampling Status – The new well is complete, the new pump has been installed. The disposition of waste is the only issue remaining.
- CERCLA 5-year Review Design Upgrade Status – The design review is complete. The new well will be hooked up by December 31, 2001. There is a need to discuss the operations of the system with Ecology.
- Open Discussion – No discussion.

## **3. 200-ZP-1**

- Pump and Treat Treatment Systems Operation's Status – The system is operating between 130 gpm and 170 gpm. There were some low flow and electrical problems. The valve and platform upgrade will be completed in August and September. EPA stated that if there are a lot of mechanical problems, a "contained-in" determination could be done to help with waste disposal activities.
- PFP Well Planning and Field Preparation Status – Mobilization to the site is anticipated to start approximately September 10, 2001.
- Open Discussion – DOE-RL stated that the PFP well DQO and the SAP are ready to go. EPA asked whether there would be a dual-screen completion.

## **4. 200-PW-1 Plutonium/Organic-Rich Process Waste OU**

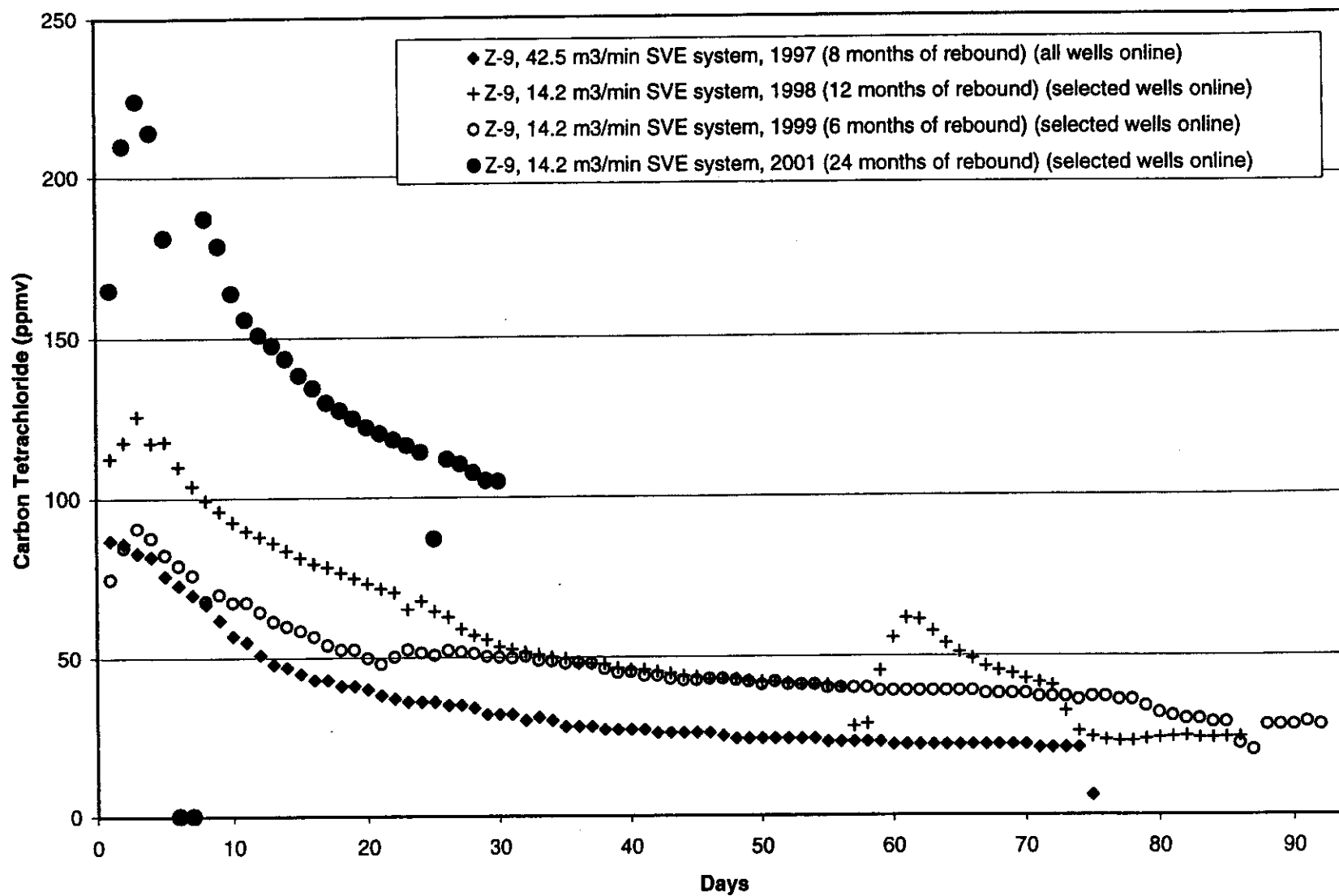
- Soil Vapor Extraction System
  - Active System Status – The system is operating at the 216-Z-9 crib at approximately 175 cfm. A handout was distributed showing preliminary data on the carbon tetrachloride concentrations. There was discussion about the relative merits of continuous versus pulsed operations. The trade-offs discussed included mass removal versus operational considerations.
  - Passive System Status – There are eight wells in the passive network. The wells have in-line GAC cartridges that are sampled once per month to estimate mass of carbon tetrachloride removed. Three of the wells have in-line flow and concentration meters that measure flow and concentration hourly. Laboratory measurements of the carbon tetrachloride present on the GAC cartridges estimate that approximately 250 grams of carbon tetrachloride have been removed by the eight systems over one year. Estimates based on the flow and concentration data indicate as much as 2,000 to 10,000 grams of carbon tetrachloride may have been removed by the eight systems per year.

- Open Discussion – No discussion.
- RI/FS Work
  - Work Plan Status – The draft is being reviewed within CH2M Hill. It should be out for BHI review by mid-September.
  - Dispersed CCl<sub>4</sub> Plume DQO Status and Schedule – A briefing with regulators was held last week. It is on track for finalization.
- 5. 200-CW-1 Gable/B Pond and Ditches Cooling Water OU**
- Feasibility Study Status – The modeling work supporting the inside-the-fence line Feasibility Study is nearing completion.
- 6. 200-CS-1 Chemical Sewer OU**
- Status of 216-A Ditch Sampling Activity – Funding for ditch sampling was received from CH2M Hill. The SAP is being developed and is due to CH2M Hill later this week. It will be sent to Ecology in mid-September. After the review by Ecology, an air monitoring plan and WCP will be submitted at the end of September.
- 7. 200-TW-1 Scavenged and 200-TW-2 Tank Waste OUs**
- Status of Field Activities
  - Preliminary Screening Results from the 216-T-26 Crib – A handout was distributed of the analytical data at the 216-T-26 crib. It showed elevated cesium in the zone from 18 – 20.5 feet. There was also a cesium spike from 24 – 26 feet. These results are consistent with the field screening. There were elevated strontium readings from 34 – 36 feet. The spectral gamma logging results track with the analytical data from soil samples.
  - Preliminary Results From 216-B-38 – The highest levels of contamination were seen from 15 – 40 feet below the ground surface. Lower levels of contamination extended to 60 feet below ground surface. The borehole was geophysically logged on August 15, 2001, and the results are not yet available.
  - Status of 216-B-7A Sampling Activity – Drilling began last Tuesday night and the borehole is currently at 48 feet. Contamination was first seen at 18.5 feet, five feet above the base of the structure.
- PNNL Science and Technology Project Supplemental Soil Samples
  - Waste Management – A request for some soil samples for analysis was made by PNNL to support studies of plutonium mobility. A Sample Handling plan has been approved by DOE-RL. Additional samples from 7A may be requested by the tank farm characterization project.

**8. 200-PW-2 Uranium-Rich Process Waste OU**

- Rev. 0 Work Plan Under Final Regulator Approval – The work plan was approved, however the TPA Change Package is still being negotiated with Ecology.

Preliminary Data



Comparison of Maximum Carbon Tetrachloride Rebound Concentrations  
Monitored at 200-PW-1 (200-ZP-2) Soil Vapor Extraction Sites  
FY 1997 - FY 2001

200-PW-1 (200-ZP-2)			November 1998 - July 1997		October 1997 - September 1998		July 1998 - September 1999		July 1999 - June 2001		July 2001 - September 2001	
Location (Well or Probe)	Site	Zone	Maximum Rebound Carbon Tetrachloride (ppmv)	months of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months of rebound	Maximum Rebound Carbon Tetrachloride (ppmv)	months of rebound
79-03/ 5 ft	Z-18	1	0	8	0	3	0	12				
79-06/ 5 ft	Z-1A	1	not measured		not measured		1.4	12				
79-11/ 5 ft	Z-1A	1	0	8	0	6	2.9	12				
86-06/ 5 ft	Z-9	1	not measured		not measured		0	3				
86-06-01/ 5 ft	Z-9	1	not measured		not measured		0	3				
86-06/ 5 ft	Z-9	1	1.3	8	0	9	1.9	6				
87-05/ 5 ft	Z-1A	1	not measured		0	3	1.0	12				
87-08/ 5 ft	Z-1A	1	not measured		1.5	3	2.6	12				
94-02/ 5 ft	Z-9	1	0	8	not measured		1.4	3				
95-11/ 5 ft	Z-9	1	0	8	2.1	9	2.5	6				
95-12/ 5 ft	Z-9	1	1.1	8	1.5	9	1.3	6				
95-14/ 5 ft	Z-9	1	not measured		not measured		0	3				
CPT-13A/ 9 ft	Z-1A	2	not measured		0	6	1.0	12				
CPT-16/ 10 ft	Z-9	2	not measured		0	9	1.5	6				
CPT-17/ 10 ft	Z-9	2	not measured		4.2	9	5.1	6	8.6	24		
CPT-18/ 15 ft	Z-9	2	not measured		6.5	9	5.0	6	5.2	24		
CPT-31/25 ft	Z-1A	2	not measured		0	6	0	12				
CPT-18/ 25 ft	Z-9	2	not measured		not measured		not measured		1.8	24		
CPT-32/ 25 ft	Z-1A	2	not measured		9.1	6	10	12	16.5	18	0	1
CPT-4A/ 25 ft	Z-1A	2	not measured		not measured		not measured		3.5	0	0	1
CPT-30/ 28 ft	Z-18	2	not measured		not measured		3.2	12	1.4	18	0	1
CPT-13A/ 30 ft	Z-1A	2	2.2	8	not measured		not measured		3.6	18	0	1
CPT-7A/ 32 ft	Z-1A	2	not measured		2.3	6	5.4	12	6.2	18	3.8	1
CPT-27/ 33 ft	Z-9	2	1.2	8	not measured		not measured		2.6	24		
CPT-1A/ 35 ft	Z-18	2	2.0	8	1.4	3	3.0	12	7.7	18	11.3	1
CPT-28/ 40 ft	Z-9	2	40.1	8							52.8	0
CPT-33/ 40 ft	Z-1A	2	not measured		2.0	3	2.6	12			0	1
CPT-34/ 40 ft	Z-18	2	2.3	8	not measured		1.7	12	1.9	0	1.5	1
CPT-21A/ 45 ft	Z-9	2	65.8	8	52.7	9	57	3	127	24	90.9	0
W15-220SST/ 52 ft	Z-9	2	2	8	not measured		1.8	3	2.5	24		
CPT-28/ 60 ft	Z-9	2	not measured		1.5	0	3.7	3				
CPT-9A/ 60 ft	Z-9	2	45.5	8	41.1	0	44	3	68	24	38.1	0
CPT-30/ 68 ft	Z-18	2	1.7	8	not measured		3.0	12				
CPT-32/ 70 ft	Z-1A	2	7.4	8							4.0	1
CPT-13A/ 70 ft	Z-1A	2	5.2	8	not measured		5.6	12				
CPT-24/70 ft	Z-9	2	not measured		3.2	9	3.8	3				
W15-218SST/ 70 ft	Z-9	2	14.8	8	not measured		7.6	3	7.8	24		
CPT-18/ 75 ft	Z-9	2	not measured		not measured		not measured		18	24		
CPT-31/ 76 ft	Z-1A	2	4.0	8	not measured		4.2	12				
CPT-33/ 80 ft	Z-1A	2	5.8	8	not measured		9.2	12				
W15-82/ 82 ft	Z-9	2	28.9	8	5.5	9	46	6	55	24		
W15-85/ 82 ft	Z-9	2	not measured		15.3	9	39	6	43	21		
CPT-21A/ 86 ft	Z-9	2	221	8	206	9	148	6	195	24	179	0
CPT-34/ 86 ft	Z-18	2	36.3	8	5.9	3	0	12				
W15-218SST/ 86 ft	Z-9	2	not measured		not measured		0	3				
CPT-28/ 87 ft	Z-9	2	280	8	230	9	203	6	224	24	167	0
CPT-1A/ 91 ft	Z-18	2	3.9	8	not measured		4.2	12			5.7	1
CPT-4A/ 91 ft	Z-1A	2	not measured		7.7	3	14	12			7.5	1
CPT-9A/ 91 ft	Z-9	2	103	8	34.5	9	72	3			57.2	0
W15-85/ 92 ft	Z-9	2	not measured		not measured		not measured		51	24		
W18-252SST/ 100 ft	Z-1A	2	38.2	8	17.8	3	24	12				
W18-152/ 113 ft	Z-12	2	48.8	8	11.1	3	33	12	25	18	10.2	1
W15-217/ 115 ft	Z-9	3	797	8	630	9	561	6	442	24		
CPT-24/ 118 ft	Z-9	3	44.6	8	37.7	9	37	6	35	24		
W15-220SST/ 118 ft	Z-9	4	21.9	8	not measured		36	3	34	24		
W18-158L/ 123 ft	Z-1A	3	not measured		143	3	492	12	284	18	90.6	1
W18-167/ 123 ft	Z-1A	3	323	8	79.7	3	228	12	248	18	283	1
W15-218SST/ 130 ft	Z-9	4	298	8	not measured		47	3	54	24		
W18-248/ 134 ft	Z-18	3	206	8	20.4	3	215	12	176	18	44.6	1
W18-248/ 136 ft	Z-1A	3	288	8	88.3	3	177	12	214	18	306	1
W15-218SST/ 155 ft	Z-9	5	59.6	8	not measured		24	3	44	24		
W15-220SST/ 185 ft	Z-9	5	14.5	8	not measured		13	3	15	24		
W15-8L/ 189 ft	Z-9	6	22.6	8	17.8	9	1.3	6				
W15-9L/ 189 ft	Z-9	6	19.3	8	15.0	9	15	6	20	21		
W18-7/ 200 ft	Z-1A	6	28.5	8	17.3	3	29	12				
W18-6L/ 208 ft	Z-1A	6	36	8	31.3	6	15	12				
W18-12/ 210 ft	Z-18	6	not measured		3.8	3	19	12				

\* - based on location (Z-1A/18/12 or Z-9) of monitoring point; specific points may be beyond SVE zone of influence during particular operating configurations

- Z-18 and Z-12 wells off-line Oct 96 - Apr 98

- CPT-1A, CPT-9A, and possibly CPT-7A appeared to be beyond SVE zone of influence in Oct 96 based on differential pressure (BHI-01105, p. 6-1)

- CPT-9A, CPT-21A, CPT-26 beyond SVE zone of influence in May 96 based on CCM concentrations and airflow modeling based on measured vacuums (BHI-01105, p. 6-1)

**Carbon Tetrachloride Rebound Concentrations  
Monitored at 200-PW-1 (200-ZP-2) Soil Vapor Extraction Sites  
July 2001**

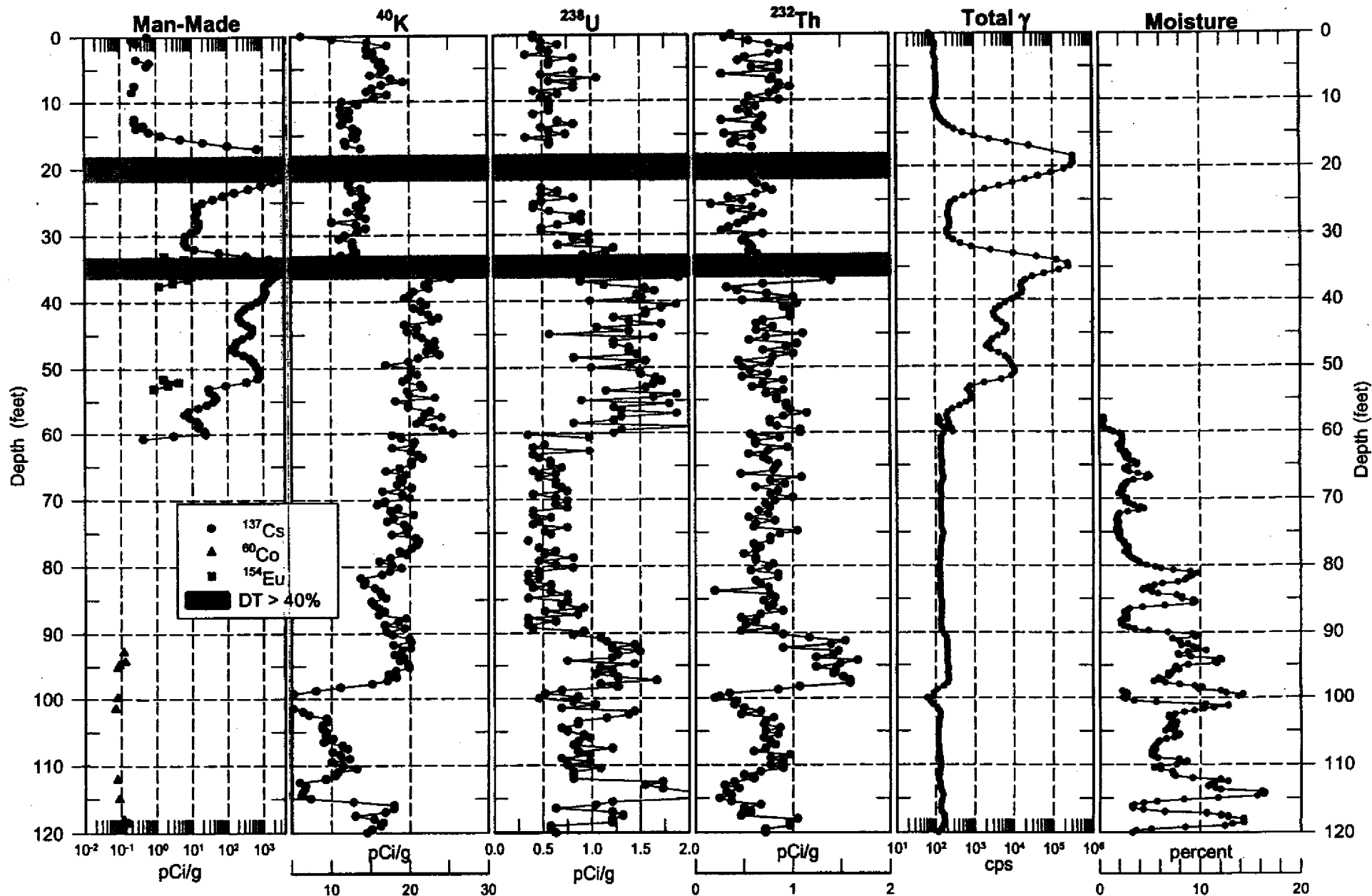
200-PW-1			
(200-ZP-2)			07/31/2001
Location	Site	Zone	
(Well or Probe)			CCl <sub>4</sub>
/feet bgs			(ppmv)
CPT-32/ 25 ft	Z-1A	2	0
CPT-4A/ 25 ft	Z-1A	2	0
CPT-30/ 28 ft	Z-1A	2	0
CPT-13A/ 30 ft	Z-1A	2	0
CPT-7A/ 32 ft	Z-1A	2	3.8
CPT-1A/ 35 ft	Z-12	2	11.3
CPT-28/ 40 ft	Z-9	2	52.8
CPT-33/ 40 ft	Z-1A	2	0
CPT-34/ 40 ft	Z-18	2	1.5
CPT-21A/ 45 ft	Z-9	2	90.9
CPT-9A/ 60 ft	Z-9	2	38.1
CPT-32/ 70 ft	Z-1A	2	4.0
CPT-21A/ 86 ft	Z-9	2	179
CPT-28/ 87 ft	Z-9	2	167
CPT-1A/ 91 ft	Z-12	2	5.7
CPT-4A/ 91 ft (a)	Z-1A	2	7.5
CPT-9A/ 91 ft	Z-9	2	57.2
W18-152/ 113 ft	Z-12	2	10.2
W18-158L/ 123 ft	Z-1A	3	90.6
W18-167/ 123 ft	Z-1A	3	283
W18-249/ 134 ft	Z-18	3	44.6
W18-248/ 136 ft	Z-1A	3	306
(a) Water noted in line at CPT-4A, 7/31/01.			

## 216-T-26 Crib Analytical Data (Preliminary)

Sample #	Depth (ft bgs)	Concentrations (pCi/g)		
		Cs-137	Sr-90	Pu-239/240
B125Y3	10.0 - 12.5	ND	ND	ND
B125Y2	18.0 - 20.5	47900	1500	44.5
B125X3	22.0 - 24.5	318	43.2	0.491
B125Y4	27.5 - 30.0	0.54	ND	ND
B125X2	34.0 - 36.5	21200	49100	6320
B125X5	67.3 - 69.8	ND	ND	ND
B125Y9	92.5 - 94.5	ND	ND	ND
B125X7	147.5 - 150.0	ND	ND	ND

216-T-26 Crib

## C3102 Combination Plot

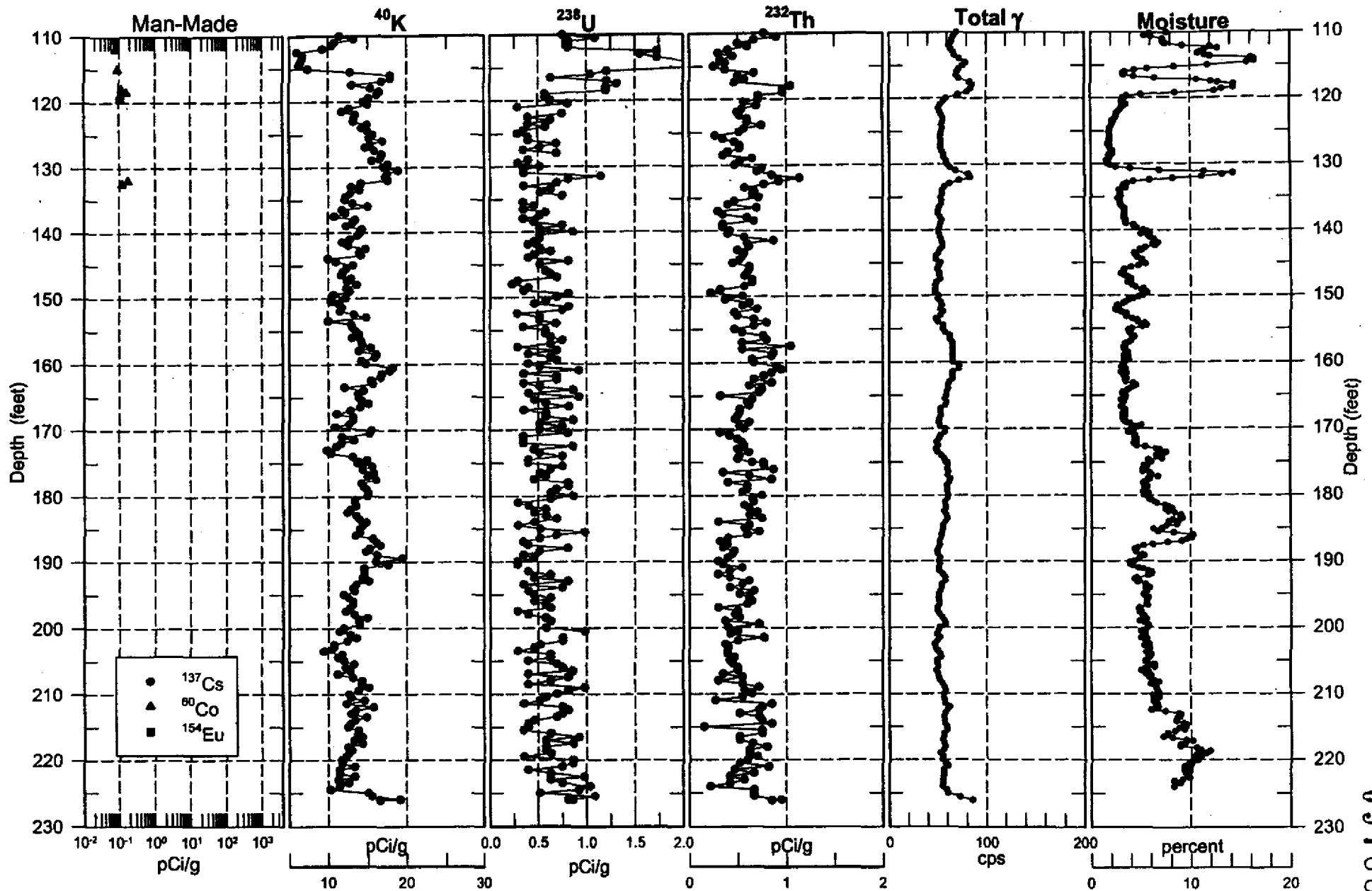


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216-T-26 Crib

## C3102 Combination Plot



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